

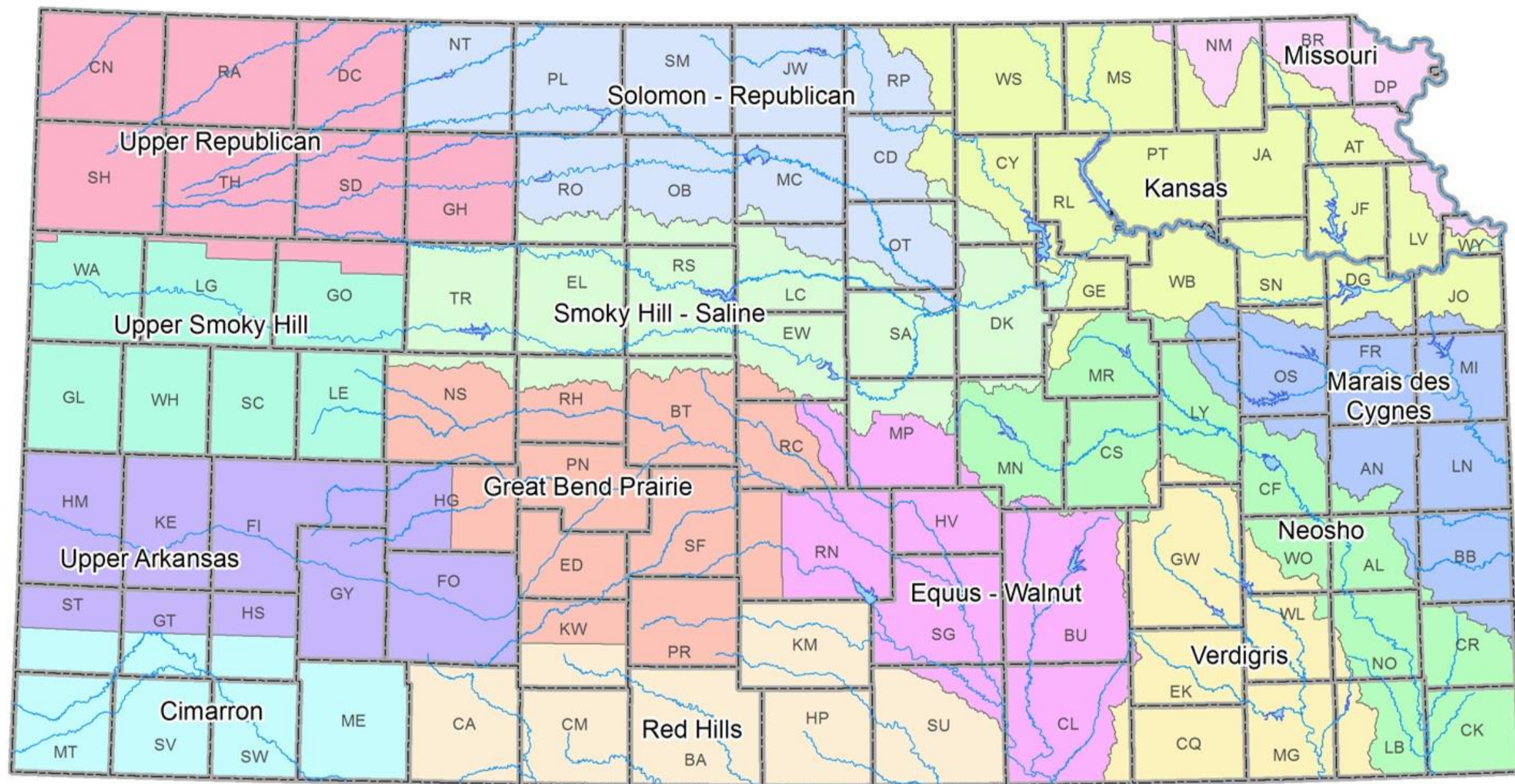
KANSAS WATER VISION IMPLEMENTATION – A REGIONAL APPROACH

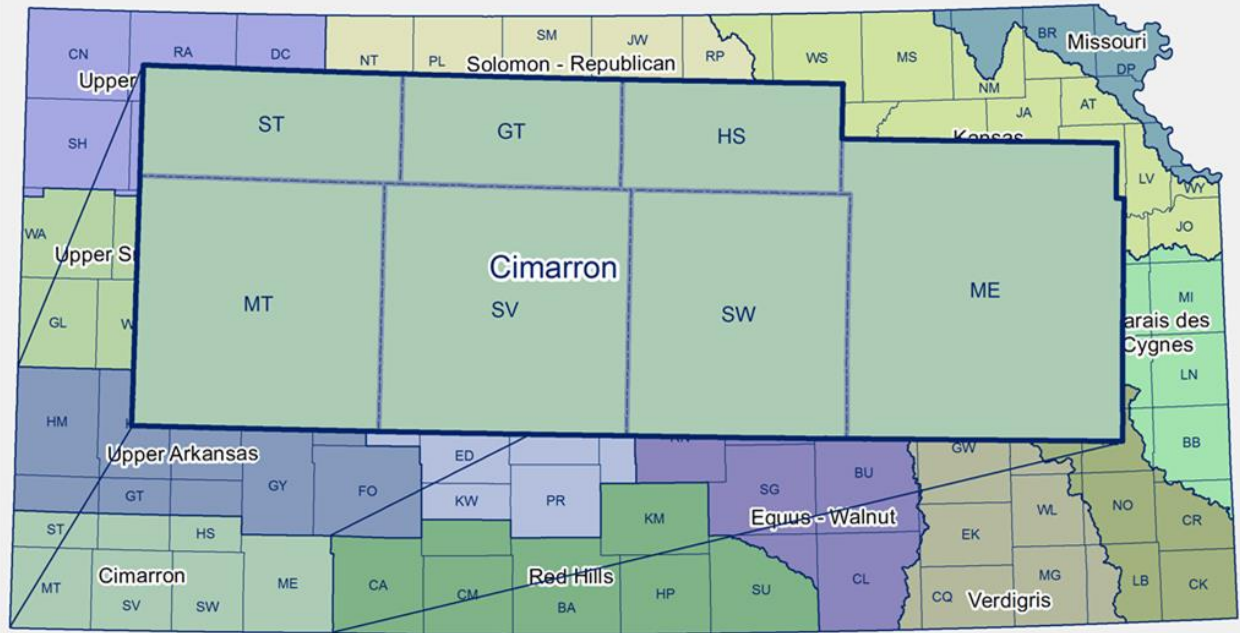


State Conservation Commission Area Spring Workshops

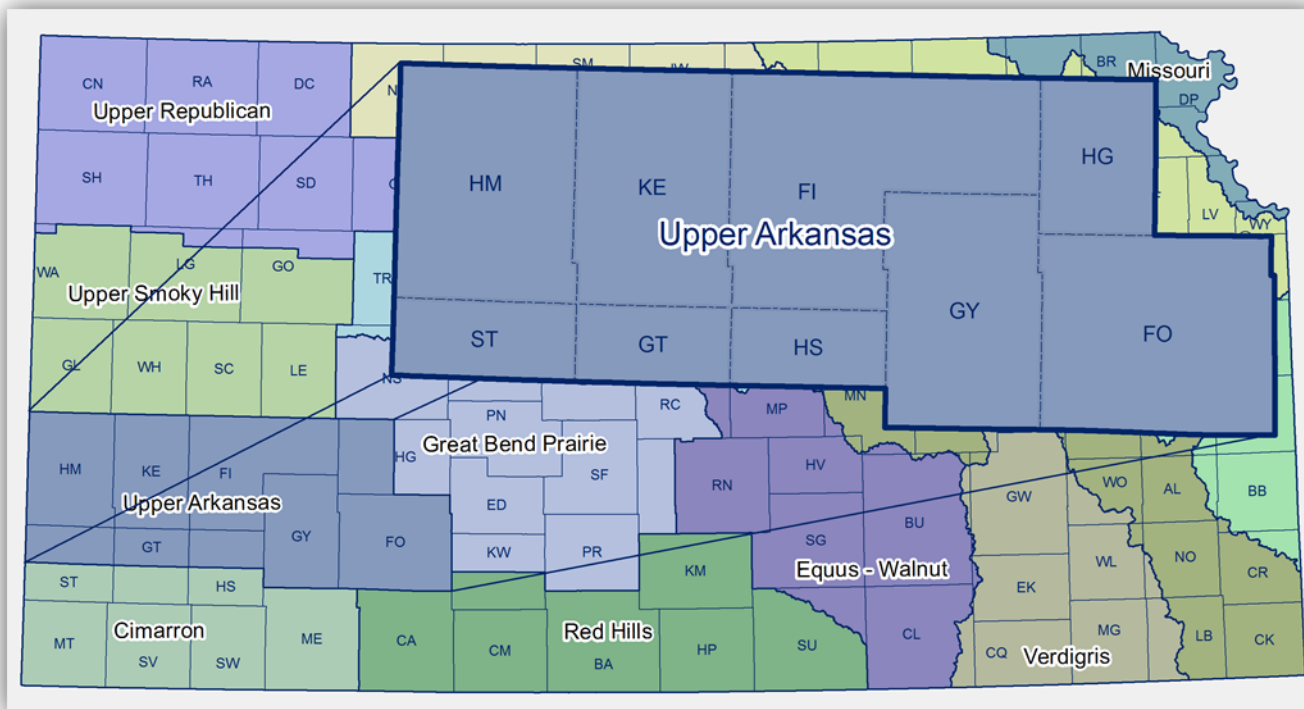
March 8, 2017

REGIONAL ADVISORY COMMITTEES

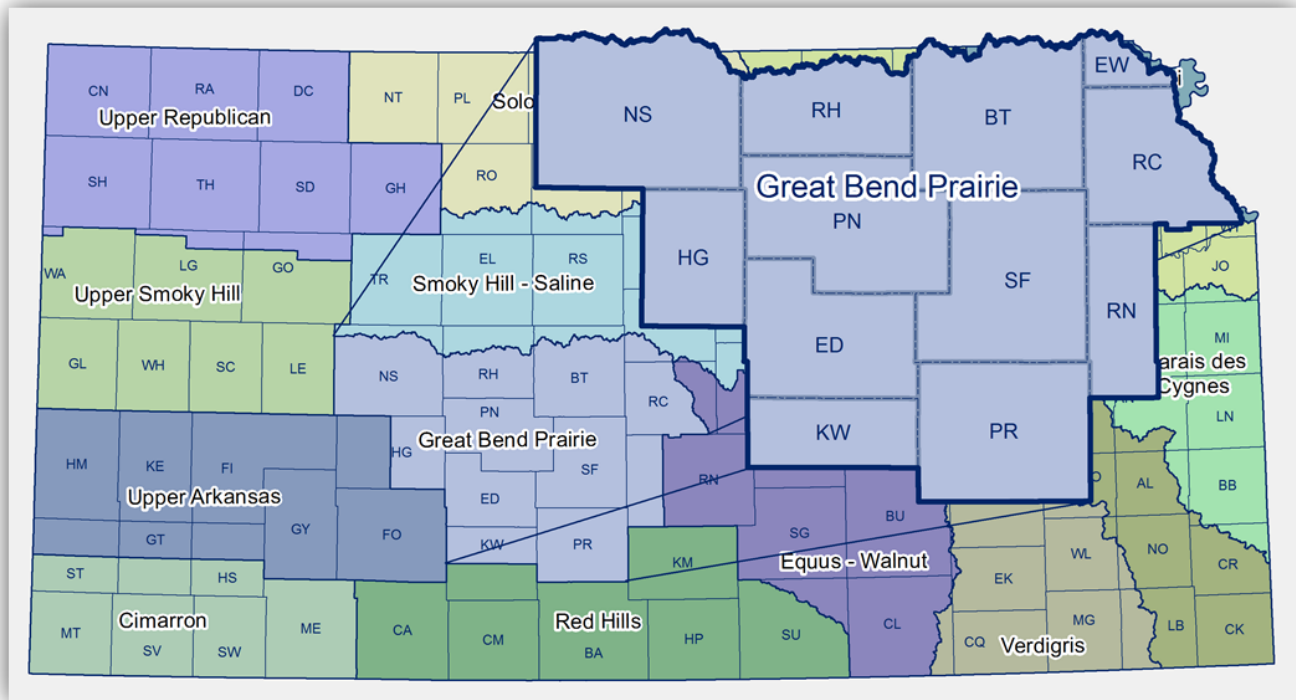




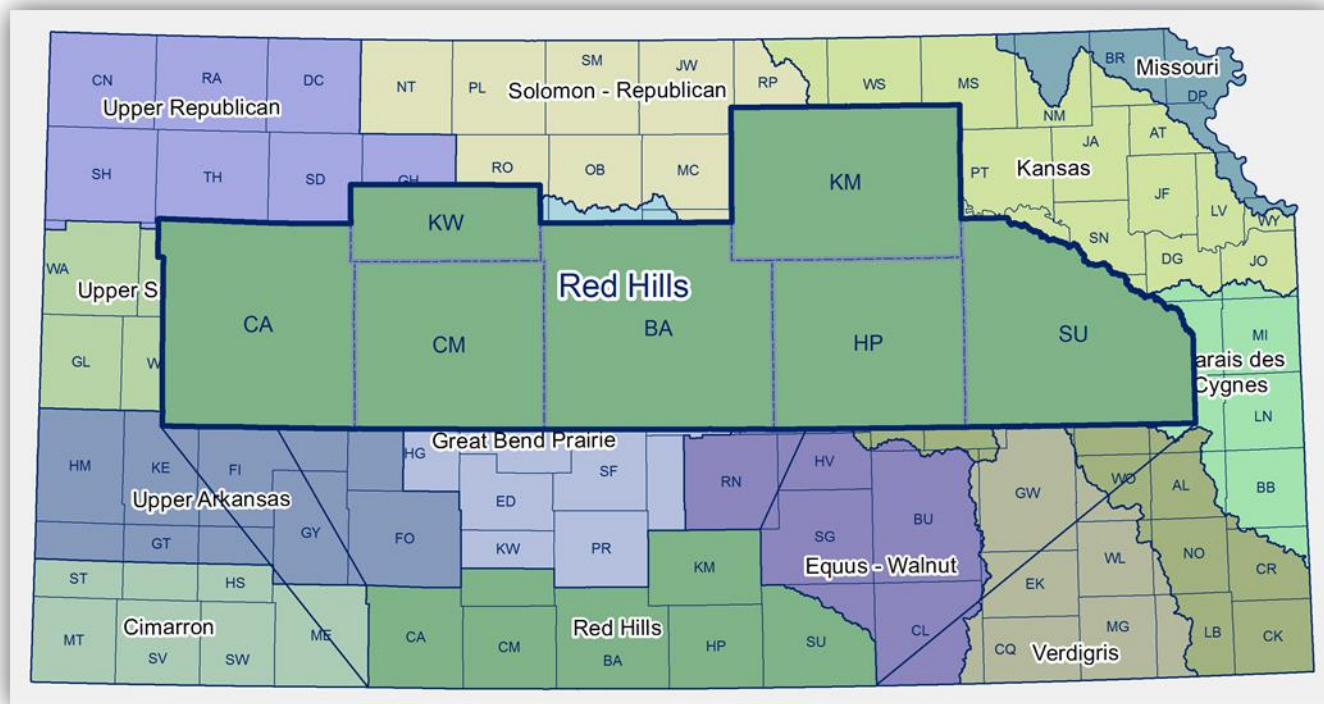
Membership			
Name	City	Category	Term
Nick Hatcher (Chair)	Liberal, KS	Industry/Commerce (cc)	2019
Vacant		At Large Public 4	2019
Trista Brown	Satanta, KS	At Large Public 2	2017
Michael Bryant	Kansas	Agriculture 2	2019
Calvin Burke	Liberal, KS	Public Water Supply (cc)	2019
Kirk Heger	Hugoton, KS	Irrigation	2017
Brian Hemann	Hugoton, KS	Agricultural Industry	2019
Matt Higgins	Elkhart, KS	Public Water Supply 2	2017
Danny Law	Ulllysses, KS	Conservation/Environment (cc)	2019
Vacant		At Large Public 3	2019
Bret Rooney	Satanta, KS	Groundwater Management	2017
Jim Sipes	Manter, KS	Agriculture (cc)	2017
Ellen Verell	Meade, KS	At Large Public (cc)	2017



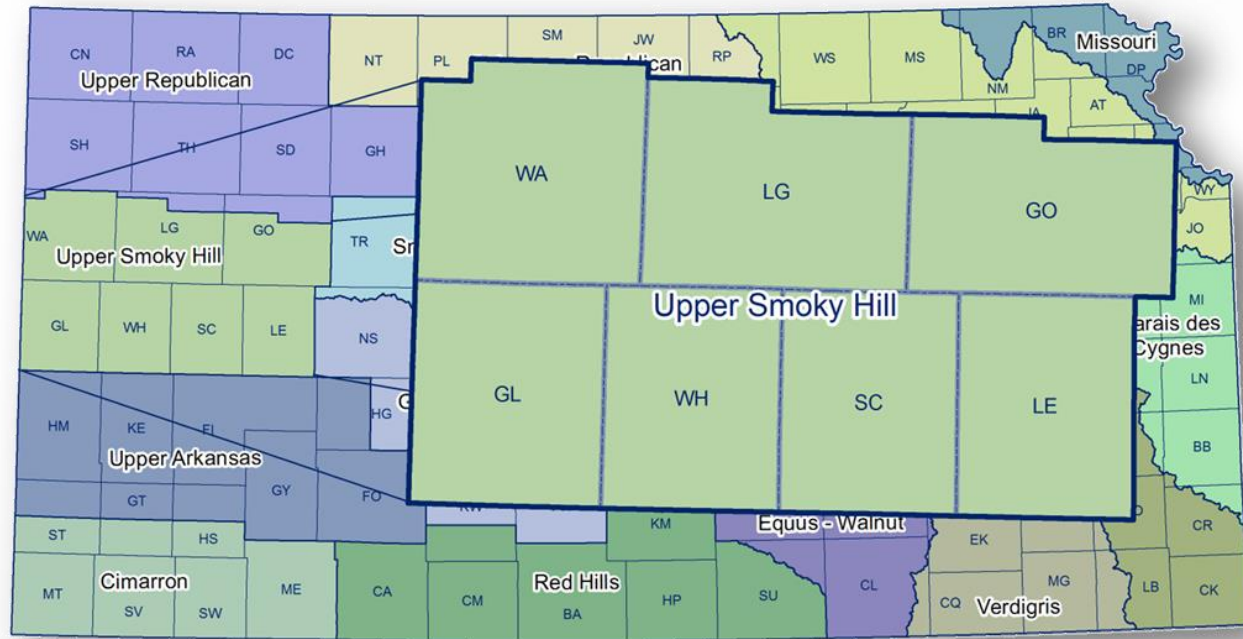
Membership			
Name	City	Category	Term
Ted Boersma (Chair)	Cimarron, KS	Dairy	2017
Hugh Brownlee	Syracuse, KS	At Large Public (cc)	2017
Roy Dixon	Garden City, KS	Agriculture Industry	2017
Bill Simshauser	Lakin, KS	At Large Public 2	2017
Steven Hines	Coolidge, KS	Surface Water Irrigation	2017
Titus Jaeger	Lakin, KS	Groundwater Irrigation	2019
Fred Jones	Garden City, KS	Public Water Supply (cc)	2017
Joe Jury	Ingalls, KS	Agriculture (cc)	2019
Wayne Keller	Ford, KS	At Large Public 3	2017
Michael MacNair	Jetmore, KS	Conservation/Environment (cc)	2019
Kyle Nelson	Holcomb, KS	Industry/Commerce (cc)	2019
Mike O'Brate	Ingalls, KS	Groundwater Management	2019
Ray Slattery	Dodge City, KS	Public Water Supply 2	2019



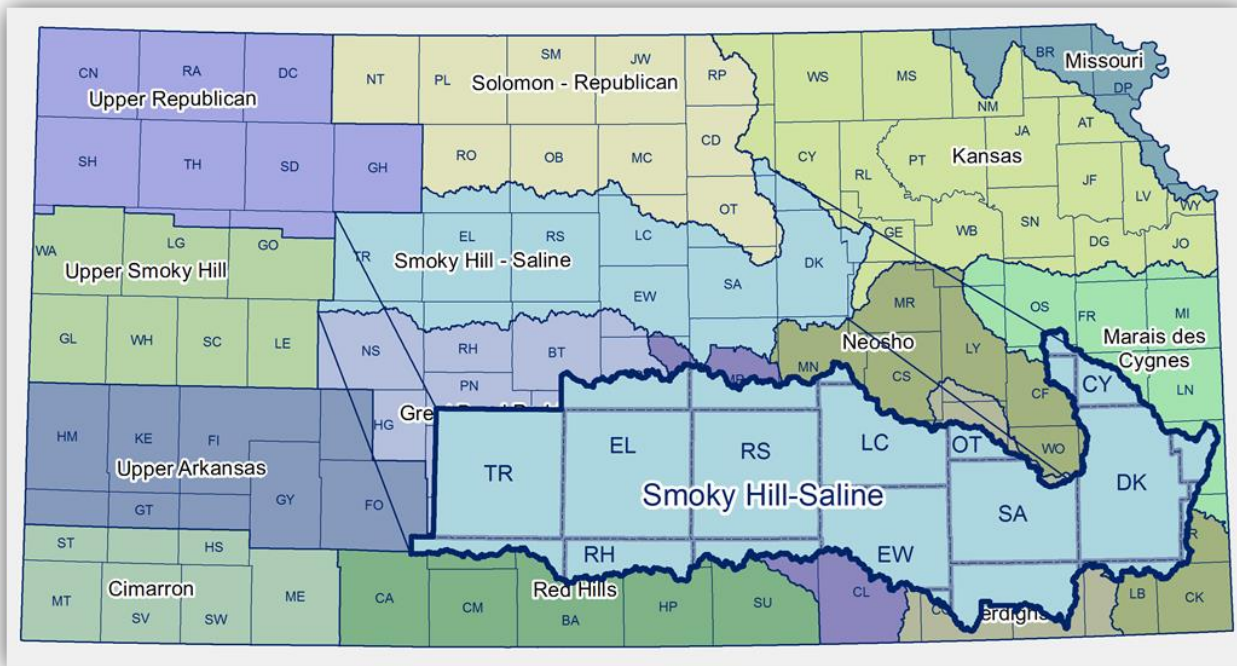
Membership			
Name	City	Category	Term
Berry Bortz (Chair)	Preston, KS	Agriculture (cc)	2019
Jay Dill	Kinsley, KS	Public Water Supply 2	2017
Daniel Filbert	Macksville, KS	Agriculture 2	2017
Orrin Feril	Stafford, Kansas	At Large Public (cc)	2017
John Haas	Larned, KS	At Large Public 2	2019
Jeremiah Hobbs	LaCrosse, KS	Watershed Protection	2019
Jeff Holste	Burdett, KS	Industry/Commerce (cc)	2017
Lane Massey	Larned, KS	Public Water Supply 3	2019
Keith Miller	Barton County, KS	Agriculture 3	2019
Roger Mohr	Albert, KS	Groundwater Irrigation	2019
John Sweet	Lyons, KS	Public Water Supply (cc)	2019
Tom Turner	St. John, KS	Conservation/Environment (cc)	2017
Taggart Wall	Sterling, KS	Public Water Supply 4	2017



Membership			
Name	City	Category	Term
Suzanne Drouhard (Chair)	Danville, KS	Agriculture 2	2017
Clark Bibb	Coldwater, KS	At Large Public West	2019
Ken Brunson	Pratt, KS	Fish & Wildlife	2019
Jim Harden	Ashland, KS	At Large Public (cc)	2017
Amber Horbelt	Anthony, KS	Local Government	2017
Hi Lewis	Wichita, KS	Industry/Commerce (cc)	2019
Larry Mangan	Wellington, KS	Public Water Supply (cc)	2019
		Agriculture (cc)	2019
Mark Watts	Medicine Lodge, KS	Industry/Commerce 2	2017
Phil White	Wellington, KS	At Large Public East	2019
Jay Zimmerman	South Haven, KS	Conservation/Environment (cc)	2017



Membership			
Name	City	Category	Term
Shane Mann (Chair)	Quinter, KS	Irrigation	2019
Lonnie Busch	Leoti, KS	Industry/Commerce (cc)	2017
Kurt Maurath	Logan Co., KS	At Large Public (cc)	2017
Frank Mercurio	Scott City, KS	Conservation/Environment (cc)	2019
Maurice Miller	Healy, KS	Agriculture Industry	2019
Mike Todd	Scott City, KS	Public Water Supply (cc)	2019
Farrin Watt	Leoti, KS	Agriculture (cc)	2017
Danny Welsh	Wallace Co., KS	Groundwater Management	2019
Scott Noll	Scott City, KS	At Large Public 2	2017



Membership			
Name	City	Category	Term
Martha Tasker (Chair)	Salina, KS	Public Water Supply (cc)	2019
Greg Barrett	Marquette, KS	Agriculture 2	2017
Sandra Beisner	Ellis, KS	Industry/Commerce (cc)	2019
Toby Dougherty	Hays, KS	Large Public Water Supply	2019
Paul Froelich	Enterprise, KS	At Large Public 2	2017
Chris Meyer	Sylvan Grove, KS	Agriculture (cc)	2019
John Peckham	Salina, KS	Conservation/Environment 2	2019
Allen Roth	Hays, KS	Conservation/Environment (cc)	2017
Bevin Law	Longford, KS	Conservation	2017
Timothy Scheck	Russell, KS	Industry/Commerce 2	2017
Alan Scheuerman	Ellis, KS	Small Public Water Supply	2019
Brad Shogren	Lindsborg, KS	Irrigation	2017

KWA Approves RAC Action Plans

- Nearly 60 action plans developed by RACs in 2016
- 10 of 14 regions have watershed-based goals and action plans



BLUE RIBBON FUNDING TASK FORCE

Vision for the Future of Water Supply in Kansas

Supply

WATER

Conservation

Research

VISION

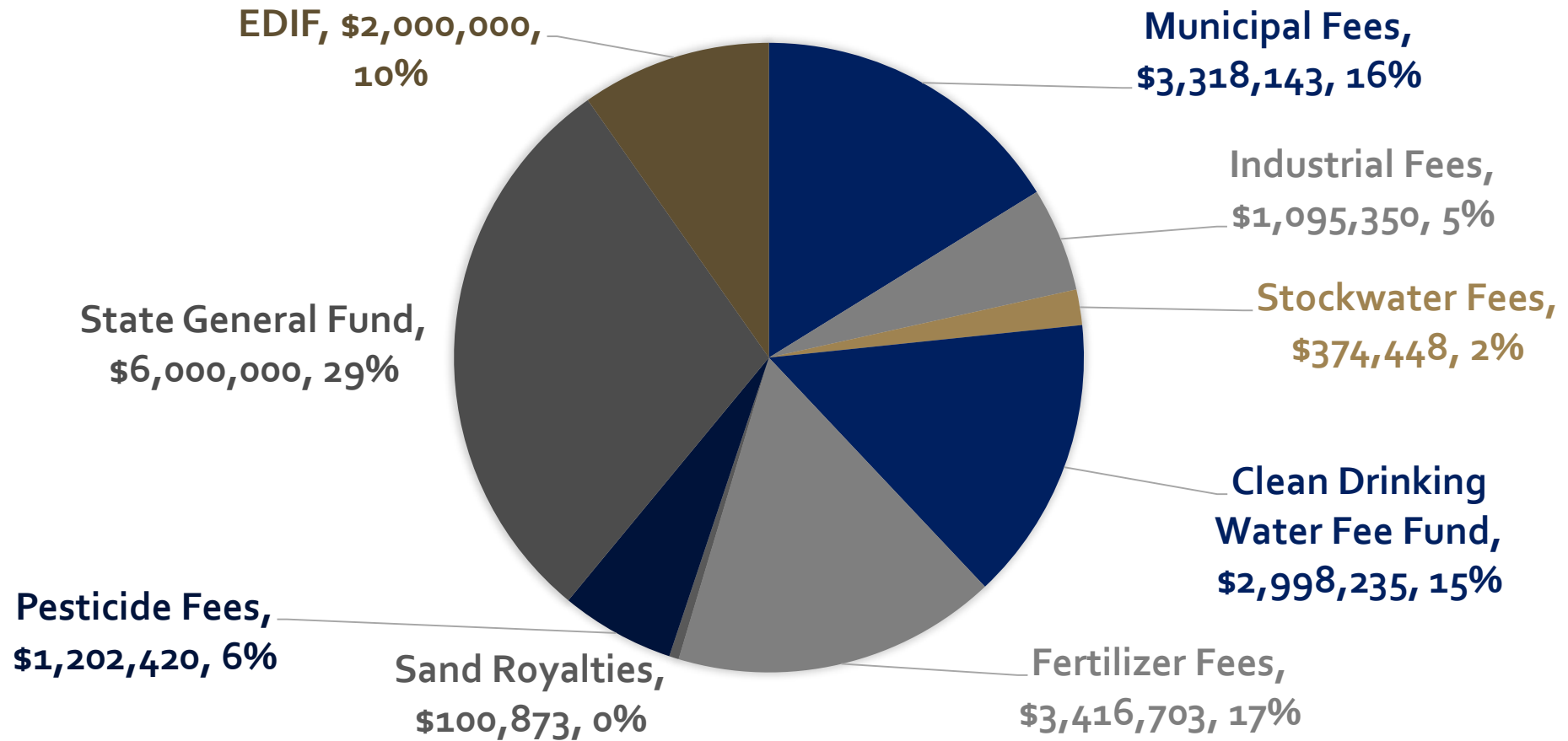
Action

Technology

Future

LOCAL

Review of existing funding and sources



Estimation of annual funding requirement to implement the Vision ~ \$55M

	Water Conservation	Water Management	Technology and Crop Varieties	Additional Sources of Water
Research		\$300,000	\$4,500,000	\$500,000
Education and Outreach	\$4,250,000		\$5,000,000	
Actions and Practices	\$21,900,000	\$100,000	\$1,500,000	\$17,500,000
Administration	Should agency administration be paid from implementation funds?			
Total	\$26,150,000	\$400,000	\$11,000,000	\$19,000,000

* Does not include estimated annual funding needs from Regional Advisory Committee Action Plans

Evaluation of various funding sources

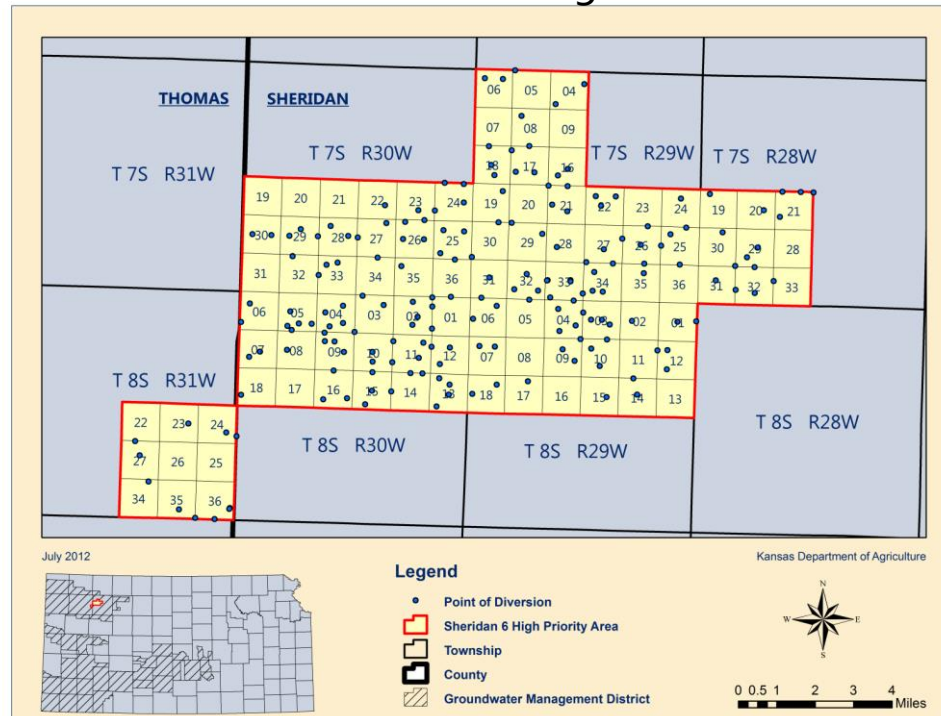
- Increase existing State Water Plan Fund fees
- Water right fee/Irrigation fee
- Bottled drinking water fee
- Residential electric fee
- Statewide retail sales tax

CURRENT IMPLEMENTATION ACTIONS

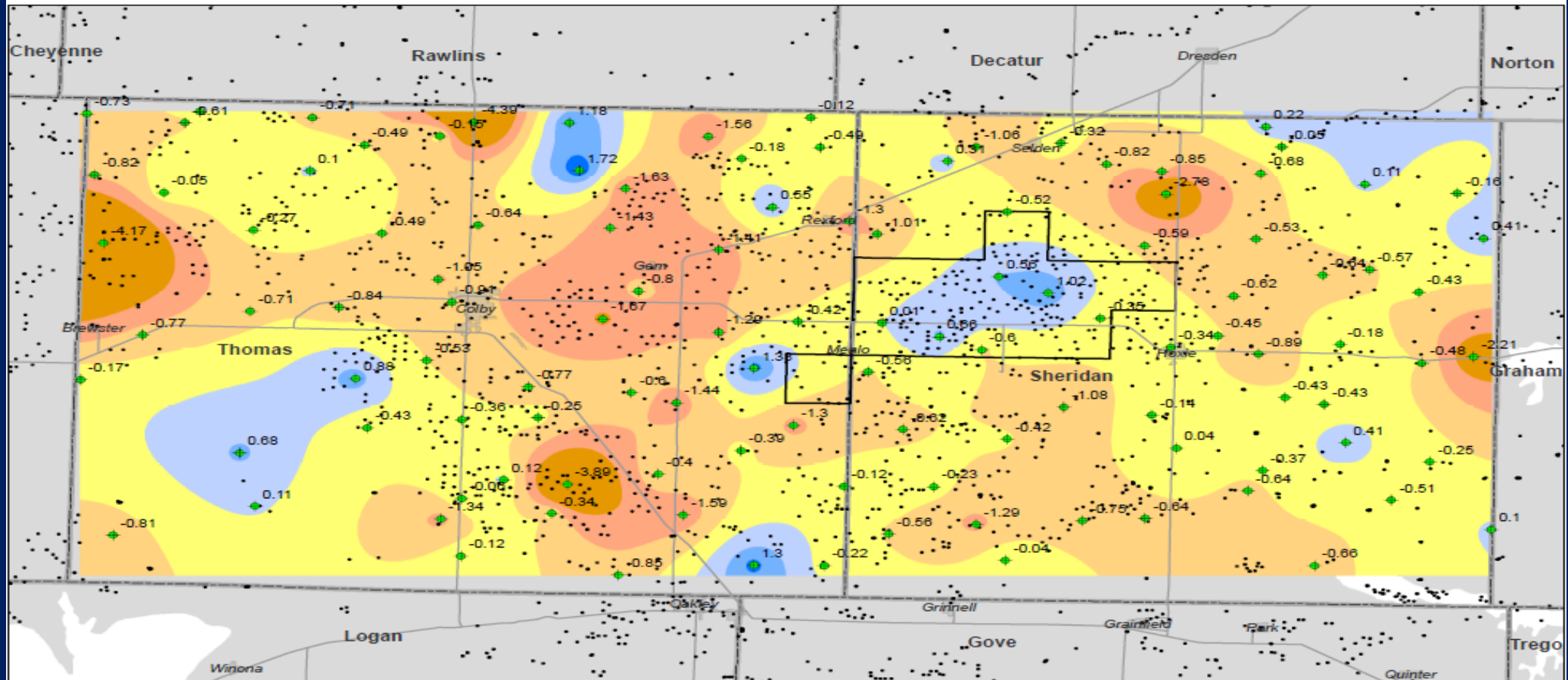
Local Enhanced Management Areas (LEMA)

- Sheridan County – First approved - 55 inches over 5 yrs
- Overall water reduction 20% +
- Producers allowed to move water within boundaries
- Groundwater levels increased inside LEMA in 2015
- Economic results positive so far

- Approved by 2012 Legislature
- Locally-led through groundwater management districts
- Allows for locally identified water use reductions with state enforcement
 - Water use flexibilities allowed
 - Does not permanently alter water right
 - Water allocations packaged into 5 year flex accounts

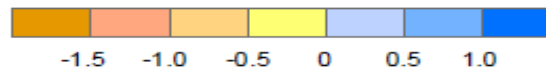


**Interpolated 2015-2016 Water Level Change,
Thomas and Sheridan Counties, Kansas**
Cooperative Water Level Network
Kansas Geological Survey, KDA- Division of Water Resource
Provisional Results, Subject to Change

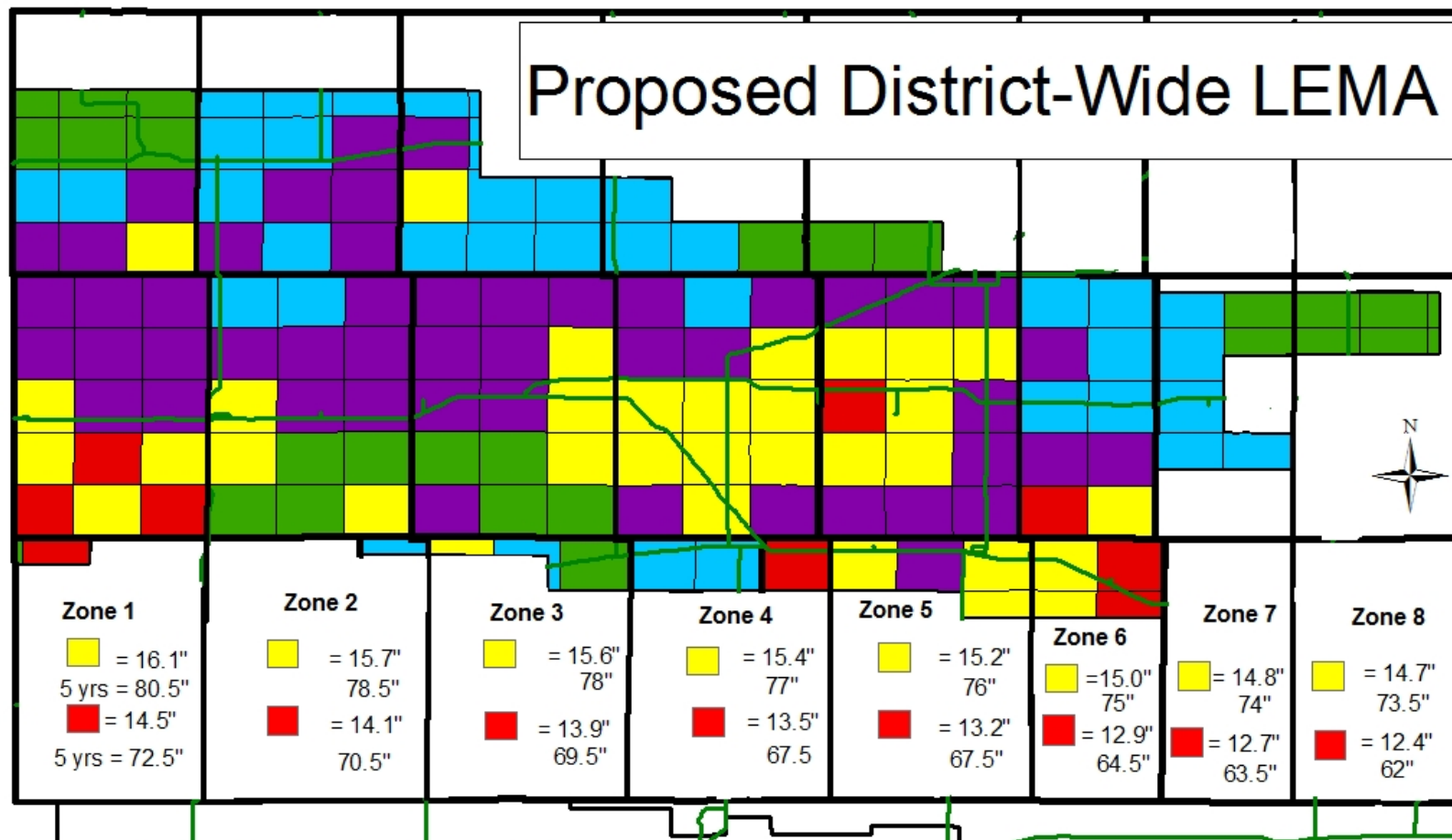


- Water Right Well
- Measured Groundwater Well

Change in Feet



Proposed District-Wide LEMA



- Townships with 2%+ Average Annual Decline in 2004-2015
- Townships with 1-2% Average Annual Decline in 2004-2015
- Townships with 0.5 - 1% Average Annual Decline in 2004-2015 (18 inch max restriction)
- Townships with 0-.5% Average Annual Decline in 2004-2015
- Townships with no decline 2004-2015

PUBLIC MEETINGS:

Nov. 29: Colby City Limits Convention Center; 1:30 pm
 Nov. 30: NW Tech - Union Hall, 1:30 pm MTN
 Dec 1: CN County 4H Building; 1:30 pm
 Dec 5: Hoxie Elks Lodge, 1:30 pm

Prepared by Shannon Kenyon GMD 4

LEMA discussions underway in FI and KE Counties

- Stakeholders and GMD #3 conducting meetings for a possible LEMA in NW Finney and E Kearny County
- Dwane Roth and Garden City providing leadership for this effort

WATER CONSERVATION AREAS

What are Water Conservation Areas (WCAs)

- Signed into law in April 2015 by Governor Sam Brownback
- Provide a tool to water right owners to extend the usable lifetime of the Ogallala-High Plains Aquifer
- Developed by a water right owner or group of water right owners with the consent of the chief engineer to reduce water withdrawals while maintaining economic value via water right flexibility

WCA's

- 5 approved
- Up to 30 in the works
- WCAs located in Hamilton, Finney, Wichita, Scott and Lane Co's

WATER TECHNOLOGY FARMS

Water Technology Farms



- Three Water Technology Farms established for 2016 growing season.
- KSU providing technical assistance at all three.
- Up to 7 additional farms to be added for 2017

FIELD DAY August 2, 2016
10 a.m.

Water Technology Farm — T&O Farms, LLC

South of Garden City on Hwy 83 (15.5 miles) • Turn west on T.V. Rd • Turn south on Stone Rd • Location on east side at large outbuilding (see back)

RSVP to the Kansas Water Office by July 26
1-888-KAN-WATER
kwo-info@kwo.ks.gov

AGENDA

Welcome
Tom Willis

Comments
Governor Brownback

Role of Water Technology Farms
Tracy Streeter

Introduce Partners
Technical Briefings
KSRE, Jonathan Aguilar
Seaman Crop Consulting, Loren Seaman
Dragon-Line, Monty Teeter

Tour of Farm
Lunch Provided
by Conestoga Energy Partners

SPONSORS

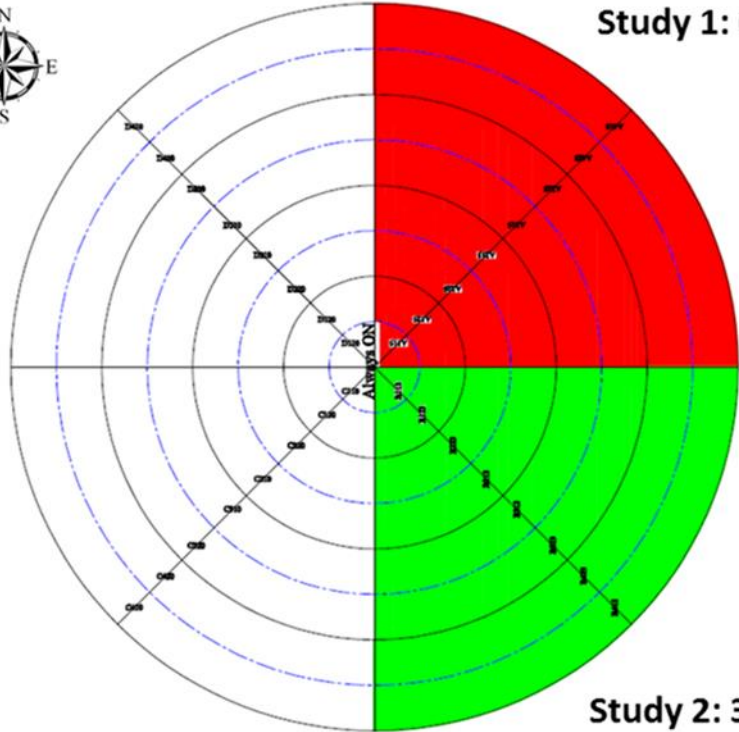
T&O Farms, LLC (Tom Willis)
Kansas Water Office
Kansas Department of Agriculture
United Sorghum Check-off Program
Kansas Corn Commission
Seaman Crop Consulting
SW Groundwater Management District #3
Conestoga Energy Partners
Teeter Irrigation
Dragon-Line
Helena
Kansas Geological Survey
Ogallala Aquifer Program
Syngenta
Hortau
Servi-Tech Expanded Premium Services
Kansas Farm Bureau
K-State- Mesonet
AquaSpy
CropMetrics
Netafim
Valley Irrigation
Presley Solutions

A public-private project for the conservation of the Ogallala aquifer implemented as part of the Kansas Water Vision

Showcase on a field scale, the latest technologies in irrigation infrastructure, irrigation water management, soil moisture management, conservation tillage, automation telemetry and other agronomic practices aimed at reducing water use.



Study 1: 600 gpm



Study 2: 300 gpm



MDI Evaluation - KSU

- **2015 results comparing MDI to spray nozzles**

- 30% reduction in evaporation
- 14" applied @ 600 gpm - 8" @ 300 gpm
- 247 bu/ac @ 600 gpm – 243 bu/ac @ 300 gpm
- 10% increase in yield with MDI on the 300 gpm well
- Water evenly distributed in soil profile
- Dry soil surface
- Minimal wheel tracks



QUESTIONS & DISCUSSION

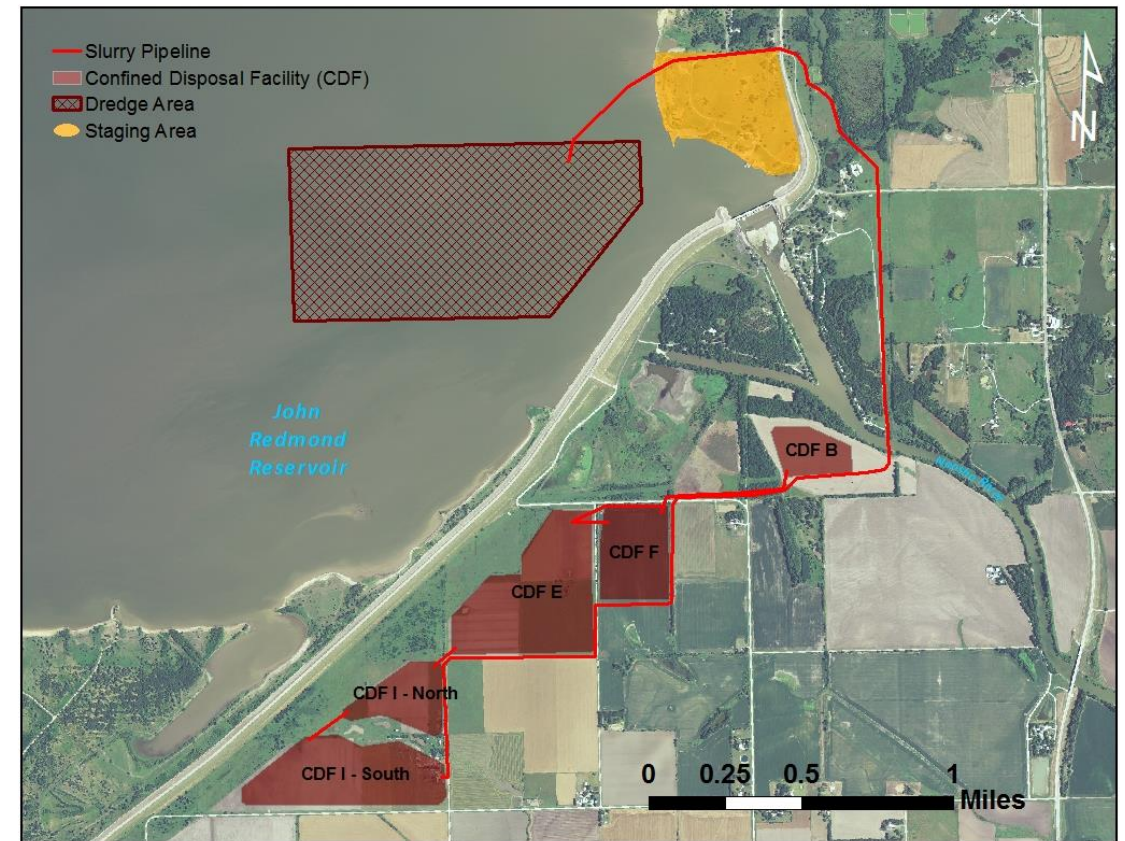
Tracy Streeter, Director
Kansas Water Office
900 SW Jackson, Suite 404
Topeka, KS 66612
785-296-3185
tracy.streeter@kwo.ks.gov



RESERVOIR ACTIVITIES

John Redmond Reservoir Dredging

- Backup supply to state's only nuclear power plant
- 1st water supply dredging project at a USACE reservoir in the US
- Phase I completed ahead of schedule



John Redmond Reservoir Dredging



The Dredge

3,000,000 million cubic yards of deposited sediment removed

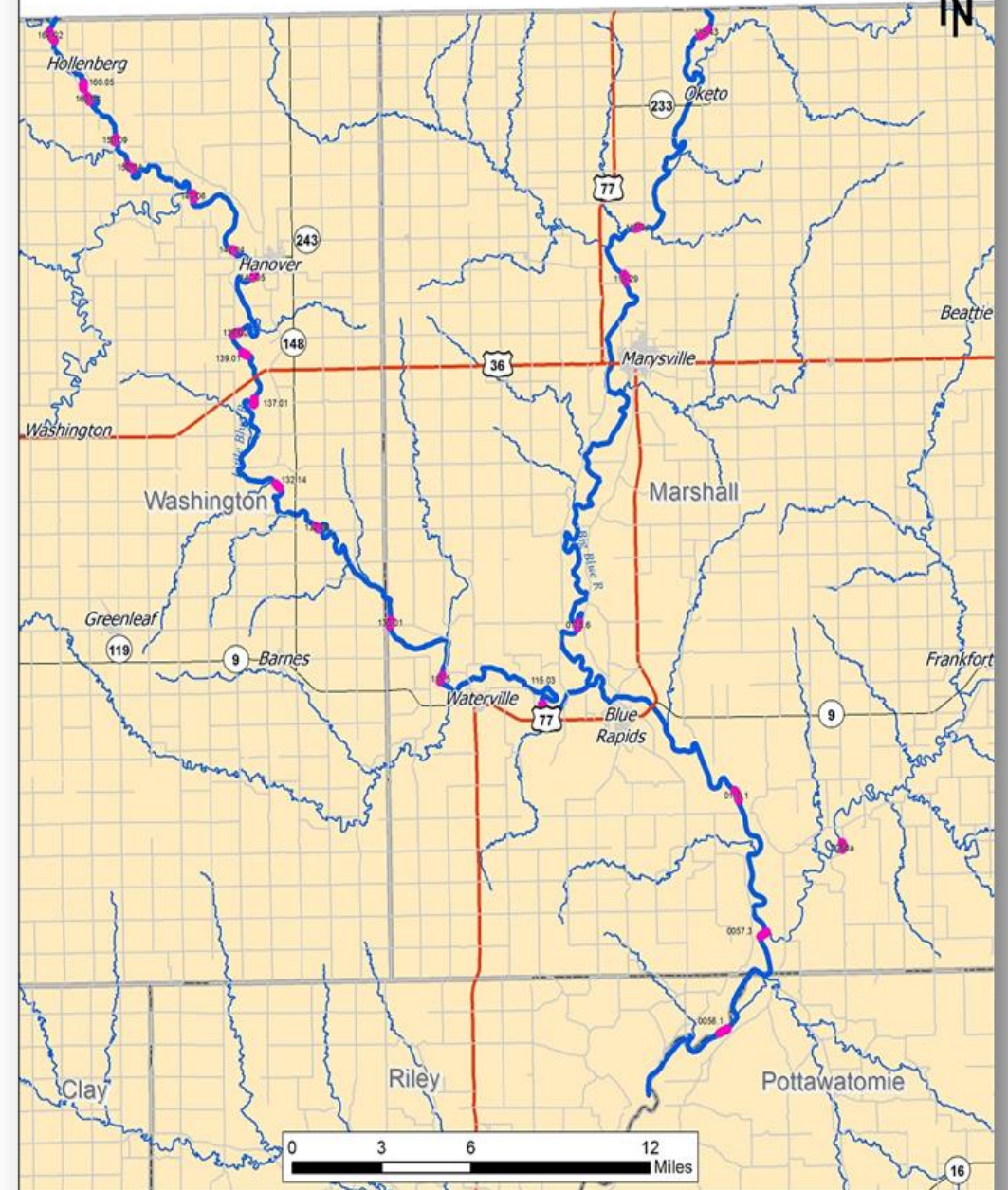


More than 1,800 acre-feet of storage restored

Restore and dispose up to three million cubic yards of sediment from John Redmond Reservoir.

Tuttle Creek Sediment Reduction

- Tuttle Creek WRAPS, KWO, KDHE and KDA-DOC coordinating and pooling funds to complete projects
- \$800,000 allocated for FY16 and FY17
- FY16 funding will be used to pay for the design of several projects above Tuttle Creek
- Construction will occur over the next couple of years

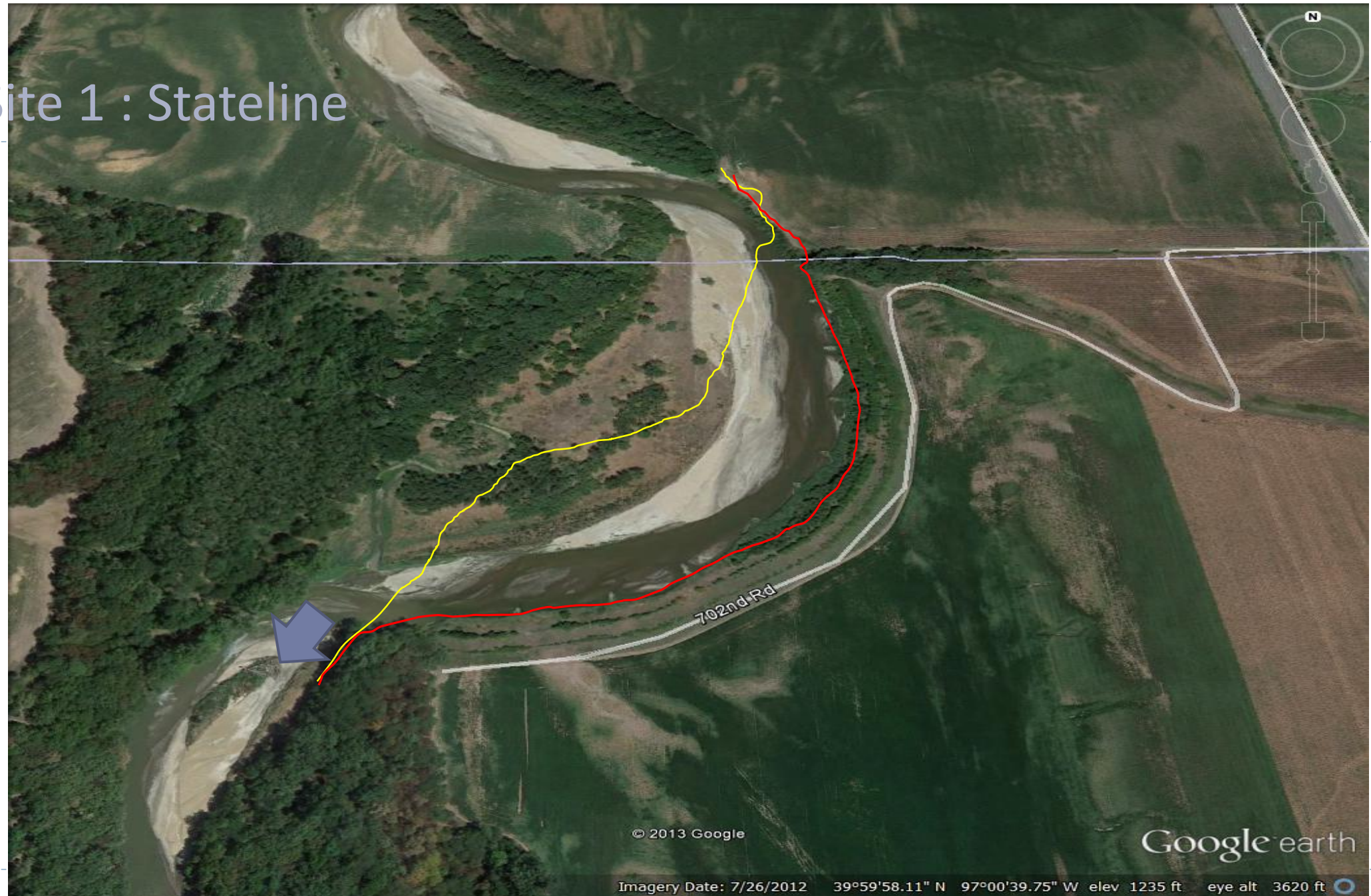


Top Eroding Streambanks: 76 - 100

Before & After



Site 1 : Stateline



Nutrients and Harmful Blue-Green Algae

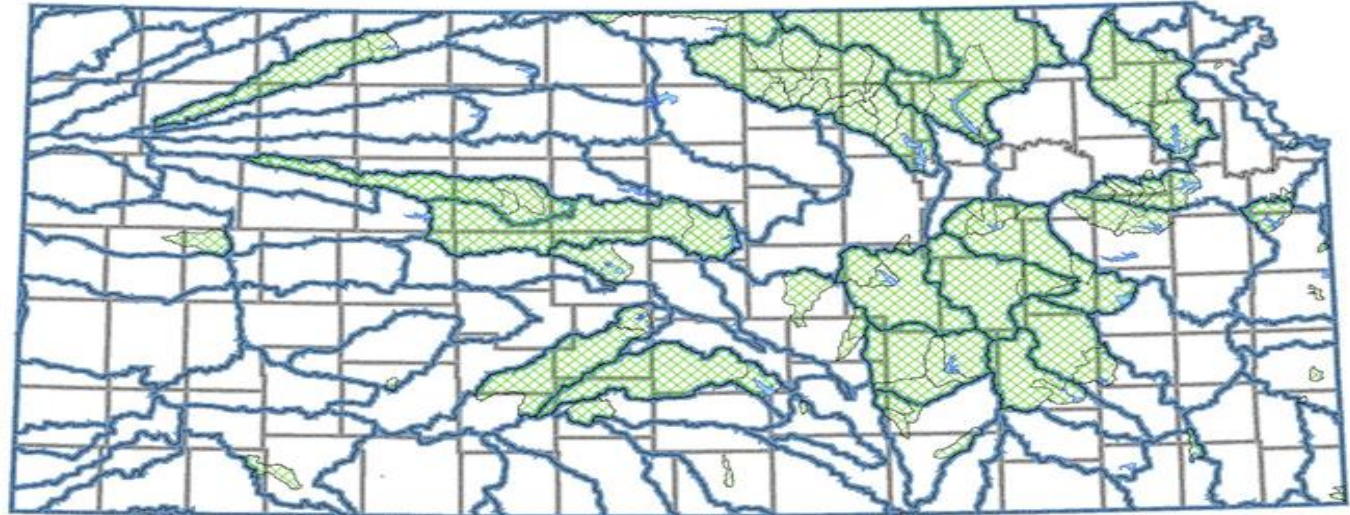
Milford, Marion Reservoirs & others.....



EQIP

- ▶ Ranking criteria for Water Quality funding modified
 - ▶ Maximum points to projects addressing Siltation, Phosphorus and Eutrophication

TMDL Priority Areas
Siltation, Total Phosphorus, and Eutrophication
With KDHE - TMDL Section Built Out Watersheds





QUESTIONS & DISCUSSION

Tracy Streeter, Director
Kansas Water Office
900 SW Jackson, Suite 404
Topeka, KS 66612
785-296-3185
tracy.streeter@kwo.ks.gov

Earl Lewis, Assistant Director
Kansas Water Office
900 SW Jackson, Suite 404
Topeka, KS 66612
785-296-3185
earl.lewis@kwo.ks.gov

